

REMARKS

This application has been carefully reviewed in light of the Office Action dated May 28, 2004. Claims 1 to 20 remain pending in the application, of which Claims 1, 6, 11 and 16 have been amended and are the independent claims herein. Reconsideration and further examination are respectfully requested.

Claims 1 to 20 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,334,721 (Horigane) in view of U.S. Patent No. 6,552,813 (Yacoub). Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention concerns generating print data by selecting a printer and a print driver to process the print job based on set print conditions. According to the invention, an information processing apparatus is connected to a plurality of printers through a network and has a plurality of printer drivers and a virtual printer driver. The apparatus also selects a specific printer from among the plurality of printers, and transmits print data to the selected printer. Print conditions of a print job are set via a user interface of the virtual printer driver, and intermediate print data is generated by receiving a drawing function formed by a graphic engine of an operating system on the basis of a draw command from an application program, where the generated intermediate print data has a format independent of a printer to which the intermediate print data is to be output. In response to the generation of the intermediate print data, the set print conditions are obtained and transmitted as printer search conditions to a search server. Then, a printer to which the intermediate print data should be output is selected on the basis of device designation information obtained from the search server in accordance with the printer search conditions. Finally, a printer driver is selected corresponding to the selected printer

and the intermediate print data is output to the graphic engine of the operating system so as to transfer the drawing function to the selected printer driver.

Referring specifically to the claims, amended independent Claim 1 is an information processing apparatus which is connected to a plurality of printers through a network, which has a plurality of printer drivers and a virtual printer driver, which selects a specific printer from among the plurality of printers, and which transmits print data to the selected printer, comprising setting means for setting print conditions of a print job via a user interface of the virtual printer driver, intermediate print data generating means for receiving a drawing function formed by a graphic engine of an operating system on the basis of a draw command from an application program, and generating intermediate print data on the basis of the drawing function, the intermediate print data having a format independent of a printer to which the intermediate print data is to be output, print condition obtaining means for obtaining, in response to the generation of the intermediate print data by the intermediate print data generating means, print conditions set by the setting means to print the print job of the intermediate print data generated by the intermediate print data generating means, search condition transmitting means for transmitting the print conditions obtained by the print condition obtaining means as printer search conditions to a search server, selecting means for selecting a printer to which the intermediate print data should be output on the basis of device designation information obtained from the search server in accordance with the printer search conditions, and intermediate print data output means for selecting a printer driver corresponding to the printer selected by the selecting means and outputting the intermediate print data to the graphic engine of the operating system so as to transfer the drawing function to the selected printer driver.

Amended independent Claims 6, 11 and 16 are method, computer storage medium and program claims, respectively, that substantially correspond to Claim 1.

The applied art, alone or in any permissible combination, is not seen to disclose or to suggest the features of Claims 1, 6, 11 and 16. More specifically, the applied art is not seen to disclose or to suggest at least the feature of an information processing apparatus that, in response to generating intermediate print data having a format independent of a printer to which the intermediate print data is to be output, obtains set print conditions to print a print job and transmits the obtained print conditions as printer search conditions to a search server, selects a printer to which the intermediate print data should be output on the basis of device designation information obtained from the search server, and selects a printer driver corresponding to the selected printer and outputs the intermediate print data to a graphic engine of an operating system so as to transfer a drawing function to the selected printer driver.

Horigane is merely seen to disclose a printing system in which a virtual printer driver includes a first intermediate data generating section that generates first intermediate print data from code data provided by an application prior to delivery of the print data to a printer driver. A second intermediate data generating section generates second intermediate data from the first intermediate data on the basis of printer control information input by a user. A print data generating section reproduces a GDI command string from the second intermediate data and sends the GDI command string to the printer driver as print data. Thus, while Horigane may generate intermediate print data, it does not obtain set print conditions in response to generating the intermediate print data, or transmit the obtained print conditions as a search condition to a search server. As such, Horigane also cannot select a printer to which the intermediate print data should be output on the

basis of device designation information obtained from the search server, nor can it select a printer driver corresponding to the selected printer. In other words, in Horigane, the printer and printer driver that are to be used to process the print data are selected by the user in advance and nothing (much less, obtained print conditions) is sent to a search server to search for a printer, and no selection of a printer driver based on a search result is performed in Horigane. Accordingly, Horigane is not seen to disclose or to suggest the features of the present invention.

Yacoub is merely seen to disclose that a printer to which data is to be output can be selected from a data source. A virtual printer 610 receives a print job which has been generated into print data and selects a printer based on a user's preferences, such as printing speed and image quality. On the other hand, the information processing apparatus of the present invention obtains print conditions from generated intermediate print data that is in a device-independent format and transmits the obtained print conditions to a search server to search for a printer. Moreover, once the printer has been selected, the present invention selects a printer driver corresponding to the selected printer. In contrast, Yacoub's printer driver is selected prior to selection of the printer since the print data is rendered into a device dependent format prior to selection of the printer. Thus, Yacoub is also not seen to disclose or to suggest at least the feature of an information processing apparatus that, in response to generating intermediate print data having a format independent of a printer to which the intermediate print data is to be output, obtains set print conditions to print a print job and transmits the obtained print conditions as printer search conditions to a search server, selects a printer to which the intermediate print data should be output on the basis of device designation information obtained from the search server, and selects a printer driver corresponding to the selected printer and outputs the

intermediate print data to a graphic engine of an operating system so as to transfer a drawing function to the selected printer driver.

It is also submitted that a combination of Horigane and Yacoub would not have resulted in the present invention. In this regard, Applicant submits that, at best, a combination of Horigane and Yacoub would have resulted a first virtual printer driver generating intermediate data so that a GDI command string could be provided to a second virtual printer driver (i.e., the virtual printer driver of Yacoub), whereby the second virtual printer driver generates print data that the second virtual printer driver then uses to search for the best printer to print the rendered print data. In other words, a combination of Horigane and Yacoub still would not have resulted in an information processing apparatus that, in response to generating intermediate print data having a format independent of a printer to which the intermediate print data is to be output, obtains set print conditions to print a print job and transmits the obtained print conditions as printer search conditions to a search server, selects a printer to which the intermediate print data should be output on the basis of device designation information obtained from the search server, and selects a printer driver corresponding to the selected printer and outputs the intermediate print data to a graphic engine of an operating system so as to transfer a drawing function to the selected printer driver.

In view of the foregoing amendments and remarks, independent Claims 1, 6, 11 and 16, as well as the claims dependent therefrom, are believed to be allowable over the applied art. Accordingly, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Edward A. Kmett", is written over a horizontal line.

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